

VUKASOVIC, P.; BORJANOVIC, S.; MARTINOVIC, A.

Preliminary studies on resistance of human lice (pediculus humanis corporis); resistance of insects to insecticides. Glasn. Hig. Inst., Beogr. 5 no.1-2:1-40 Jan-June 56.

(PEDICULI, eff. of drugs on
insecticides on body lice (Ser))
(INSECTICIDES, eff.
on body lice (Ser))

Borjanovic, S.

YUGOSLAVIA / General and Special Zoology. Insects. P
Insects and Arachnids. Chemical Method of
Controlling Harmful Insects and Arachnids.

Abs Jour: Ref Zhur-Biol., No 21, 1958, 96497.

Author : Borjanovic, S.

Inst : Not given.

Title : New Synthetic Insecticides.

Orig Pub: Med. glasnik, 1957, 11, No 10-11, 439-442.

Abstract: No abstract.

Card 1/1

BORJANOVIC, S.

Disinfection in aerogenic infections. Higijena, Beogr. 11 no.2-3:
161-165 '59.

(AIR microbiol.)
(DISINFECTION)

BORJANOVIC, S.

A method of disinfection in diarrheas. Hgijena, Beogr. 12 no.2/3:
283-288 '60.

(DIARRHEA prev & control)

(DISINFECTION)

BORJANOVIC, Slobodan

SURNAME (in caps); Given Names

Country: Yugoslavia

Academic Degrees: Dr

Affiliation: /not given/

Source: Belgrade, Narodno Zdravlje, Vol XVII, No 5, May 1961,
pp 155-158

Data: "The Disinfection Service in Yugoslavia and Plans for
Its Improvement."

BORJANOVIC, S.

Aerosol disinfection in aerogenic infections. Higijena
16 no. 2:88-92 ' 64.

EXCERPTA MEDICA Sec 4 Vol 12/1 Med. Micro. Jan 59

19. THE MECHANISM OF ANTIBIOTIC ACTION OF BACT. PRODIGIOSUM
(Russian text) - Borju S. I. - MIKROBIOL. 1957, 26/4 (464-467)
Tables 1

The antibiotic activity of strains of Bact. prodigiosum is mainly due to the red pigment (prodigiosin). Unaltered prodigiosin can be detected in the cells of cultures susceptible to the antibiotic action of Bact. prodigiosum. The agar-microscopy method showed that prodigiosin penetrates into the living cells of the inhibited yeast and bacteria. At first the plasma and the inclusions are faintly stained. Subsequently prodigiosin accumulates in the cells, as brilliant red droplets and clumps or a diffuse staining of the whole cell. During this period cells are no longer able to reproduce but are still able to transform prodigiosin into a leuco compound.

BORK, A.Kh.; GUBAREVA, M.A.; CHERNOBAYEVA, N.N.

Reagent method of cleaning incrustations from pipes and pumps.
Vod. i san. tekhn. no.8:26-28 Ag. '61. (MIRA 14:9)

(Pipes, Deposits in)
(Pumping machinery--Cleaning)

la

2

Some explanations of the "Plan of the resolution of the
Vth Mendeleev Congress on the problem of the reform
of the Russian nomenclature of inorganic compounds."
A. Kh. Bork. *Doklady Akad. Nauk SSSR*, 27, 823, 1968.
P. H. Rathmann

450.54 METALLURGICAL LITERATURE CLASSIFICATION

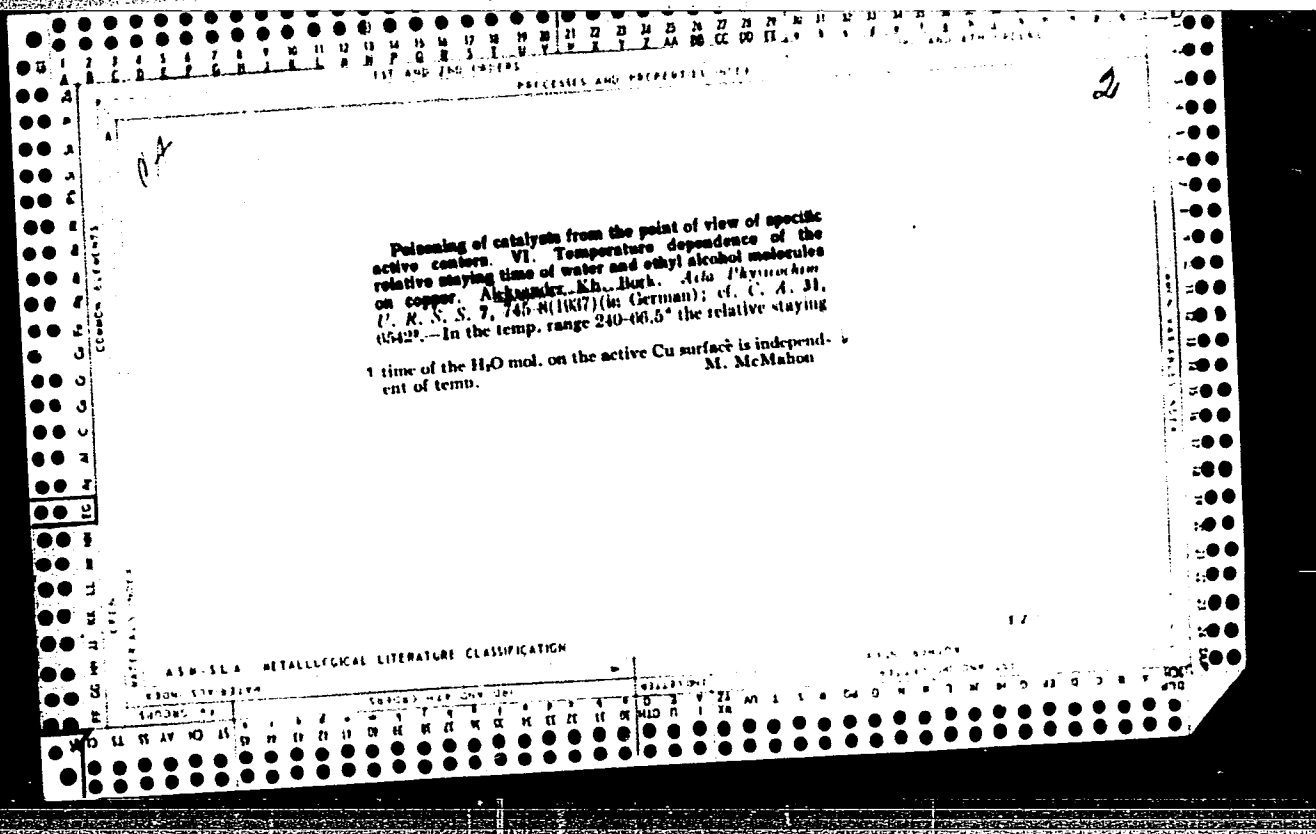
Cd

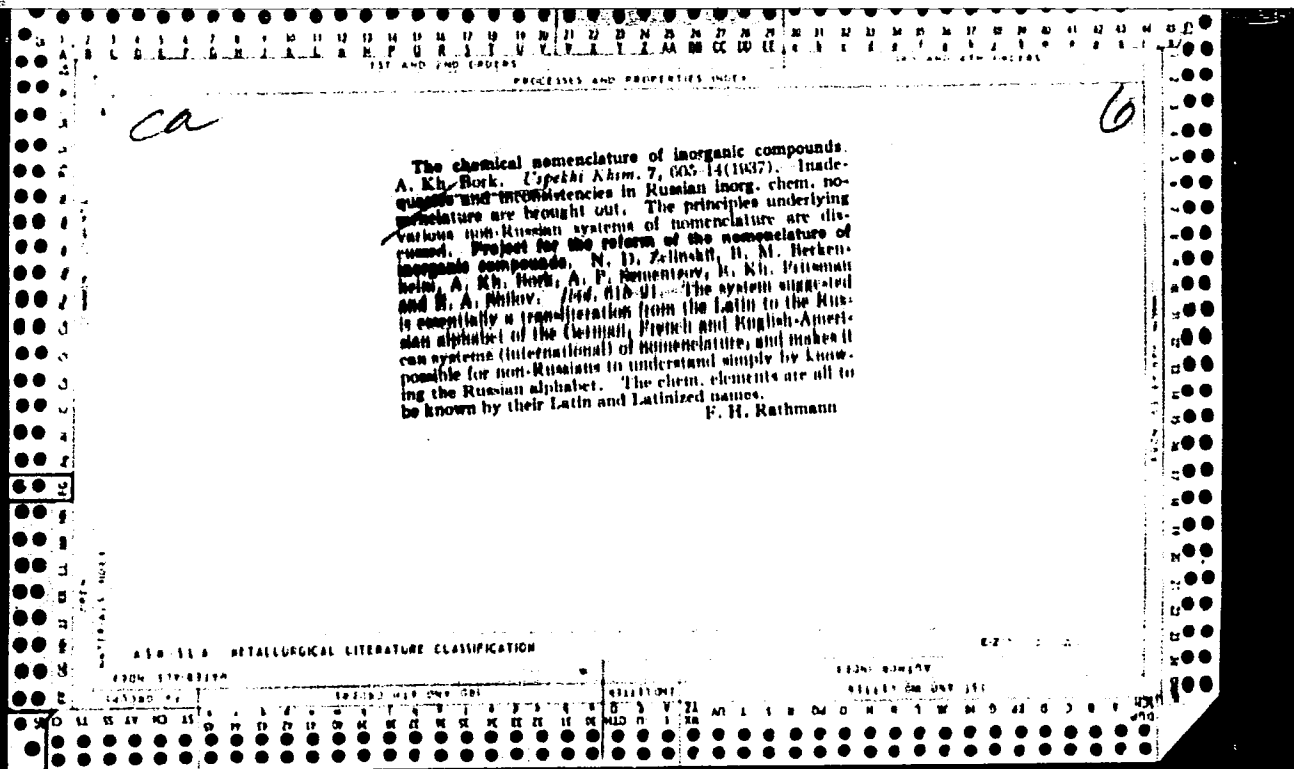
2

Catalyst poisoning from the viewpoint of the specificity
of active centers. V. Relative duration of stay of water
and ethyl alcohol molecules on copper. A. Kh. Bork and
M. I. Danylina. *Acta Physicochim. U. R. S. S.*, 6, 375,
92(1957).—See C.A., 31, 6542^b. H. C. A.

ASAC-SLA METALLURGICAL LITERATURE CLASSIFICATION

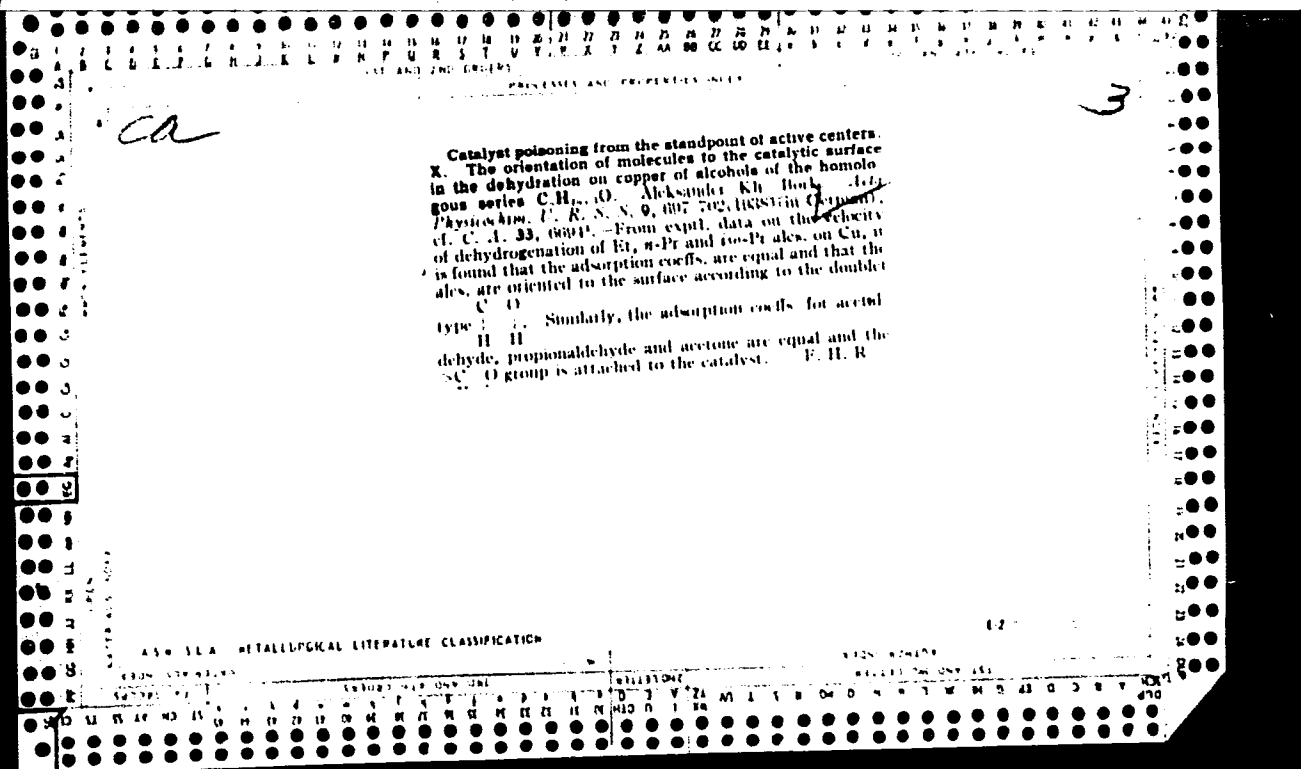
SECRETARY OF THE COMMISSION ON ATOMIC ENERGY





1ST AND 2ND ORDERS																									
PROCESSES AND PROPERTIES INDEX																									
<i>ca</i> Poisoning of catalysts from the point of view of specific active centers. V. Relative life periods of water and ethyl alcohol molecules on a copper catalyst. A. Kh. Ibrak and M. I. Darykina. <i>J. Phys. Chem.</i> (U.S.S.R.) 9, 329-34 (1967); cf. C. A. 61, 274. The relative life periods of H_2O and $EtOH$ on a pink-red Cu catalyst at 25°C were in the ratio of 1.4. The "protective influence" of H_2O in the dehydrogenation of $EtOH$ to aldehyde is due to a partial dehydrogenation of aldehyde hydrate adsorbed on the catalyst to $HOAc$. In the presence of H_2O, $EtOH$ is used up, but $HOAc$ appears in place of a part of the $MeCHO$. F. H. Rathmann																									
ASB-51A METALLURGICAL LITERATURE CLASSIFICATION																									
SECTION 1: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26																									

1ST AND 2ND COLUMNS										3RD AND 4TH COLUMNS									
PROCESS AND PROPERTIES INDEX																			
Catalyst poisoning from the viewpoint of the specificity of active centers. VII. Kinetics of the dehydration of ethyl alcohol on aluminum oxide. A. Kh. Bork and A. A. Tolmopyatova. <i>Acta Physicochim. U. R. S. S. R.</i> 577-90 (1958).—The dehydration of EtOH by Al_2O_3 obeys the equation previously obtained for the dehydrogenation of ROH (C. A. 31, 6548P). The ratio a_1/a_2 of the adsorption coeffs. of H_2O to that of EtOH at 350° is 0.65. VIII. Orientation of the molecules of the aliphatic alcohols $C_nH_{2n+1}O$ in the dehydration of the alcohols on aluminum oxide. <i>Ibid.</i> 601-602.—The dehydration of both PrOH and iso-PrOH also follows the same equation. a_1/a_2 for PrOH and iso-PrOH is identical with that for EtOH and thus, presumably, the orientation of the molecules of the different alcohols on the surface of the catalyst is similar. IX. Influence of methyl substituents on the activation energy of the dehydration of the aliphatic alcohols $C_nH_{2n+1}O$ on aluminum oxide. <i>Ibid.</i> 603-16.—The influence of Me substituents on the activation energy of the dehydration of 6 aliphatic alcohols was experimentally investigated. B. C. P. A.																			
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION																			
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SECTION 3										SECTION 4									

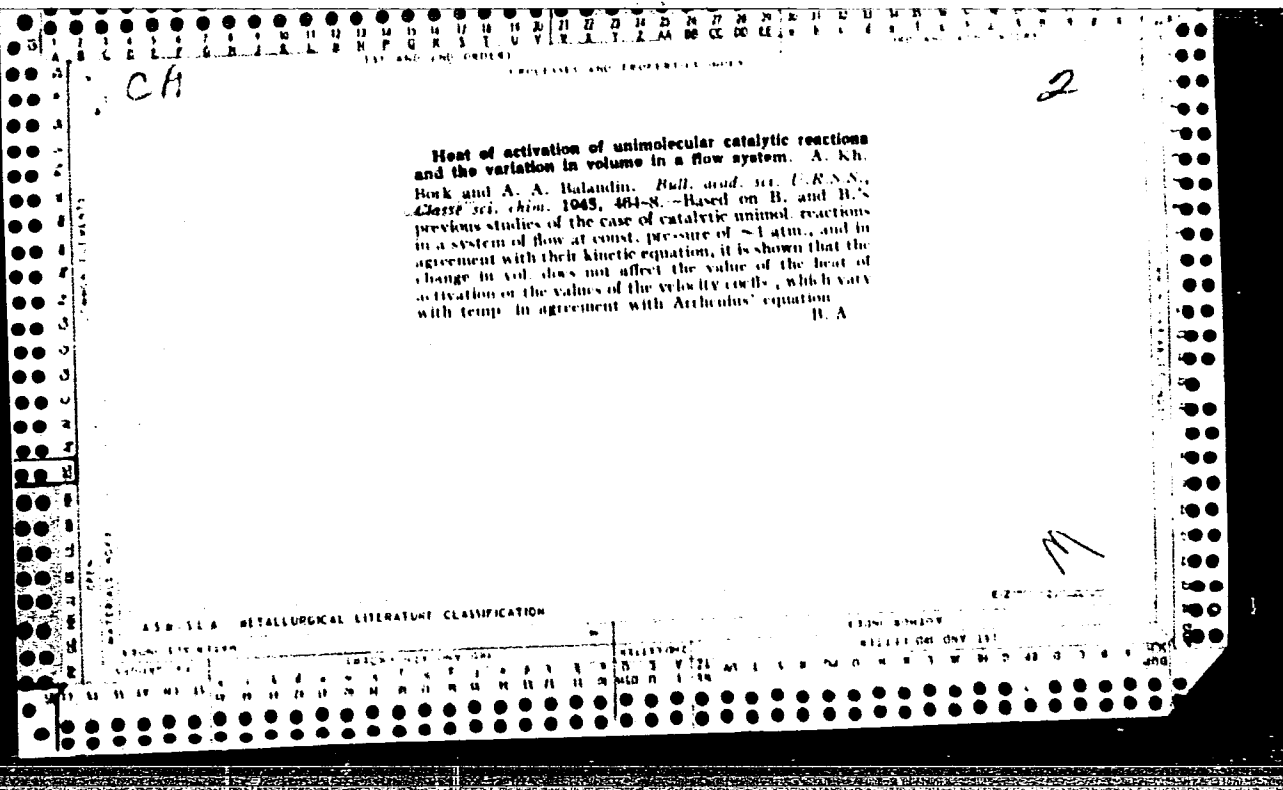


1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
PROCESSES AND PROPERTIES INDEX																																																			
<i>Cu</i> <i>2</i> Catalyst poisoning from the standpoint of the specificity of active centers. X. Orientation of molecules to the surface of the catalyst in the dehydrogenation of alcohols of the homologous series $C_nH_{2n+2}O$ on a copper catalyst. A. Kh. Berk. J. Phys. Chem. (U. S. S. R.) 13, 421-4 (1939).—See C. A. 33, 7654^h. F. H. Rathmann.																																																			
ASAC-55A METALLURGICAL LITERATURE CLASSIFICATION																																																			
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1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
CA Poisoning of catalysts from the standpoint of the specificity of active centers. II. Relative adsorption coefficient of hydrogen in the dehydrogenation of alcohol on copper. <i>Z. Elektrochem. u. Elektrochem. Phys.</i> 11, 406-16 (1939) (in German); cf. C. A. 33, 7654p. — From expl. data on the dehydrogenation of C_2H_5OH on Cu at 257.5°, it is found that the relative adsorption coeff. a_2/a_1 and the relative durations of adsorption of H, mois. on the surface are both practically zero; this proves explly. that $(a_2/a_1) + (a_1/a_2) = 1$. (Cf. C. A. 31, 374.) F. H. R.																			
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION																			
1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
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BORK, A.KH.

"An Explanation of the Mechanism of Dehydration and Dehydrogenation of Alcohols of the Homological Order $C_nH_{2n+1}OH$ over Similar Catalysts."
Zhur. Fiz. Khim., vol. 14, nos. 9-10, 1940



26

B

DEPENDENCE OF RELATIVE ADSORPTION COEFFICIENTS ON TEMPERATURE AND ON AMOUNT AND NATURE OF THE SURFACE CATALYST. (In Russian.) A. H. Bork and O. A. Markova. *Zhurnal Fizicheskoi Khimii* (Journal of Physical Chemistry), v. 22, Nov. 1948, p. 1381-1384.

The above was investigated for aluminum and thorium oxides. Method of investigation is described. Obtained tabulated data indicate that the coefficients are independent of temperature between 329.3 and 398.0°C., and of amount of active catalyst surface.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

D RA, A. KH.

PA56/49T14

USSR/Chemistry - Catalysts -
Chemistry - Surface Phenomena

Nov 48

"Properties of Catalytically Active Surfaces Deduced
from the Kinetics of Monomolecular Reactions,"
A. M. Bork, Chair of Chem, Bldg Inst, Moscow Soviet,
44 pp

"Zhur Fiz Khim" Vol XXII, No 11, 385-89

Shows that monomolecular reactions in dehydrogenation
of ethyl alcohol on copper, dehydrogenation of
dimethylcyclohexane on nickel, and dehydration of
ethyl and isopropyl alcohols on aluminum oxide
occur on a kinetically homogeneous surface. Relation

56/49T14

USSR/Chemistry - Catalysts (Contd)

Nov 48

or irrelatlon of the relative adsorption coeffi-
cients to the nature of the catalyst is explained
respectively by an identical different mechanism
of the reaction. Submitted 3 Apr 48.

56/49T14

BORK, A. KH.

A. Kh. Bork and S. V. Kirillova. Investigation of the dependence of the dehydration rate of ethyl alcohol on pressure. p. 224

Construction Inst. of Mossoviet Chair of Chem., Moscow, April 22, 1950

SO: Journal of Physical Chemistry, Vol. 25, No. 2 (Feb. 1951)

USSR/Chemistry - Catalysts

Feb 51

"Investigation of the Dependence of the Rate of Dehydration of Ethyl Alcohol on Pressure," A. Kh. Bork, S. V. Kirillova, Chair of Chem, Mossovet Constr Inst, Moscow

"Zhur Fiz Khim" Vol XXV, No 2, pp 224-230

Proved by expt that rate of dehydration of EtOH (to C_2H_4) is independent of pressure within range 766.4-31.7 mm Hg, which is explained by fact that reaction occurs on catalytically active surface which is fully covered at these pressures. Thus (1) eqs for detn of relative adsorption coeffs, rate

184T34

USSR/Chemistry - Catalysts (Contd)

Feb 51

consts, and calcn of activation energy are correct; (2) activation energy is independent of change of vol, making unnecessary calcn of time of contact.

184T34

BORK, A. Kh.

BORK, V. A.

Cand Chem Sci

Dissertation: "Qualitative Reactions of Silicon-Organic Compounds." 8/3/50

Moscow Order of Lenin State V imeni M. V. Lomonosov.

SO Vecheryaya Moskva
Sum 71

BORK, V. A.

176T9

USSR/Chemistry - Organosilicon Compounds

Mar/Apr 51

"Analysis of Organosilicon Compounds," A. P. Kreshkov, V. A. Bork, Moscow Order of Lenin Chemicotech Inst imeni D. I. Mendeleev

"Zhur Analit Khim" Vol VI, No 2, pp 78-87

Alkyl and arylchlorosilanes yield red-orange ppt on being reacted with tetramethyl diaminobenzophenone (I) in aniline. Organo-Si compd contg phenyl groups yield violet-red or cherry-red substances on walls of test tube after reaction with aluminum chloride and then benzene soln of I. Following qual reactions of alkyl and aryl deriv found: (1) Reaction with Aluminum chloride and benzene soln of I results in yellow-red ppt (2) Reaction with aluminum chloride and aniline soln of I results in ppt of different colors, so that various alkylalkoxysilanes can be distinguished from each other. Tetraethylsilane slowly dissolves aluminum chloride, forming a yellow soln which on addition of I in aniline results in red ppt. Qualitative method for detg tetraalkylsilanes is based on decolorization of Br on heating and one for detn of tetraphenylsilane on sepn of silicic acid upon heating with concd sulfuric acid.

PA 176T9

KRESHKOV, A.P.; ~~BORK~~, Y.A.; MYSHLYAYEVA, L.V.; NESSONOVA, G.D.;
CHERKASSKIY, A.A., redaktor; LUR'YE, M.S., tekhnicheskii
redaktor

[Analysis of silicon organic compounds] Analiz kremniorgani-
cheskikh soedinenii. Moskva, Gos. nauchno-tekhnicheskoe izd-vo
khimicheskoi lit-ry, 1954. 255 p. (MLRA 8:1)
(Silicon organic compounds)
(Chemistry, Analytical)

Bork, V. A.

3027. Analysis of silico-organic compounds.
Qualitative analysis of mixtures of alkoxy-silanes
with alcohols and silicon tetrachloride. A. P.
Kreshkov, V. A. Bork and V. T. Shevachukova
(J. Anal. Chem., 1963, 9 [3], 166-169).

The presence of silicon tetrachloride in tetramethoxy-
and tetraethoxy-silanes can be detected by (a)
reaction with HI to give I, (b) reaction with aniline
or with an aniline solution of tetramethylamino-
benzophenone to give a white or yellow ppt. sol. in
excess of reagent, (c) reaction with water to give
HCl, (d) reaction with $K_2Cr_2O_7$ and nitric acid in
parallel with a blank containing the esters only,
whereby the slower formation of a blue-violet
colour indicates the presence of $SiCl_4$, or (e) reaction
with ferric ferrihexathiocyanate, $Fe[Fe(SCN)_6]$, to
give decolorisation. The presence of methanol in
tetramethoxy-silane and ethanol in tetraethoxy-
silane can be detected by (a) reaction with Na to
give H_2 , (b) reaction with $Fe[Fe(SCN)_6]$, whereby a
red solution is obtained in presence of an alcohol, or
(c) reaction with $SiCl_4$ to give HCl. In presence of
 $SiCl_4$ only, the esters can be detected by their
reaction with borax and HCl or H_2SO_4 , followed by
a flame test. In presence of the alcohols only the
esters can be detected by the formation of SiO_2 on
being heated with HCl.

G. S. Smith

USSR.

Analyte of silicon-organic compounds. Qualitative analysis of mixtures of alkoxysilanes with alcohols and silicic tetrachlorides. A. P. Kreshkov, Y. A. Bork, and V. I. Shemyatenskaya. *J. Anal. Chem. U.S.S.R.* 9, 185-8 (1964) (Engl. translation).—See *C.A.* 43, 9277h.

H. L. H.

BORK V. A.

AUTHORS: Kreshkov, A. P., Bork, V. A. 75-6-23/23

TITLE: Photocolorimetric Method for the Determination of the Phenoxy-Group in Organic Silicon Compounds (Fotokolorimetri-cheskiy metod opredeleniya fenoksigrupp v kremniyorgani-cheskikh soedineniyakh).

PERIODICAL: Zhurnal Analiticheskoy Khimii, 1957, Vol. 12, Nr 6, pp. 764-764 (USSR)

ABSTRACT: The method of the determination of the phenoxy group in organic silicon compounds is based on the hydrolytic separation of the phenoxy-group as phenol and on the subsequent photocolorimetric determination of phenol as blue indophenol. Indophenol is formed by the action of chlorine and bromine water on phenolate in the presence of ammonium hydroxide. The relative error on the determination of the phenoxy-group in tetraphenoxysilane amounts to 0,83%, in phenyl triphenoxy-silane to 0,27% with chlorine water (and 0,1%) with bromine water. There are 2 references, 1 of which is Slavic.

ASSOCIATION: Chemical-Technological Institute imeni D. I. Mendeleev - Moscow (Moskovskiy khimiko-tekhnologicheskii institut imeni D. I. Mendeleeva).

Card 1/2

Photocolorimetric Method for the Determination of the
Phenoxy-Group in Organic Silicon Compounds.

75-6-23/23

SUBMITTED: January 7, 1957

AVAILABLE: Library of Congress

1. Organic silicon compounds
2. Phenoxy group-Determination
3. Photocolorimetric method--Application

USCOMM-DC-54848

Card 2/2

AUTHORS:

Kreshkov, A. P., Bork, V. A., Shvyrkova, L. A. SOV/156-58-4-29/49

TITLE:

Photometric Determination of Trimethyl Chloro Silane in the Products of the Direct Synthesis of Silico-Organic Compounds (Fotometricheskii metod opredeleniya trimetilkhlorsilana v produktakh pryamogo sinteza kremniyorganicheskikh soyedineniy)

PERIODICAL:

Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 4, pp 727-730 (USSR)

ABSTRACT:

A photometric method was worked out for the determination of trimethyl chloro silane in mixtures of other methyl chloro silanes. This method is based on the interaction of trialkyl chloro silane with phosphorus anhydride and the developing ester of the phosphoric acid is converted into molybdenum blue complex. The conversion into molybdenum blue is carried out by means of SnCl_2 . For the construction of the calibration curve, standard benzene solutions of $(\text{CH}_3)_3\text{SiCl}$ with a content of 0.0364 g $(\text{CH}_3)_3\text{SiCl}/\text{ml}$ are used. Detailed working instructions are given. The method can be applied for the determination of

Card 1/2

Photometric Determination of Trimethyl Chloro Silane in the Products of the
Direct Synthesis of Silico-Organic Compounds

SOV/156-58-4-29/49

trimethyl silane in solutions containing 0.1-100% $(\text{CH}_3)_3\text{SiCl}$.
There are 1 figure, 4 tables, and 7 Soviet references.

ASSOCIATION: Kafedra analiticheskoy khimii Moskovskogo khimiko-tekhnologicheskogo instituta im. D. I. Mendeleyeva (Chair of Analytical Chemistry at the Moscow Chemical and Technological Institute imeni D. I. Mendeleyev)

SUBMITTED: May 5, 1958

Card 2/2

AUTHORS:

Kreshkov, A. P., Bork, V. A.

SOV/75-13-4-25/29

TITLE:

The Determination of Alcohol and Phenol Admixtures in Organosilicon Compounds Containing Ethoxy, Methoxy, and Phenoxy Groups (Opredeleniye primesi spirtov i fenolov v krem-niyorganicheskikh soedineniyakh, soderzhashchikh etoksi-, metoksi- i fenoksi-gruppy)

PERIODICAL:

Zhurnal analiticheskoy khimii, 1958, Vol. 13, Nr 4, pp. 499-500 (USSR)

ABSTRACT:

The authors of the present paper used for the photometric determination of alcohols the reaction described in literature which is based on the capability of the alcohols to dissolve $\text{Fe}[\text{Fe}(\text{SCN})_6]$ under the formation of a red color (Ref 1). Besides, a method was suggested for the determination of alcohol admixtures. It is based on the capability of the alcohols to dissolve methyl violet dye under the formation of a violet colored solution: organosilicon compounds containing alkoxy groups do not dissolve this reagent. $\text{Fe}[\text{Fe}(\text{SCN})_6]$ was used in form of a dry powder. Its production was carried out from potassium thiocyanate and Ferrichloride in absolute methanol.

Card 1/3

The Determination of Alcohol and Phenol Admixtures in Organosilicon Compounds Containing Ethoxy, Methoxy, and Phenoxy Groups

SOV/75-13-4-25/29

Calibration curves for the determination of ethanol with $\text{Fe}[\text{Fe}(\text{SCN})_6]$ and with methyl violet were plotted. The photometric measurements were carried out by means of a Pulfrich photometer. The absolute error of the determination of the content of ethanol in tetraethoxy silane or other organosilicon compounds containing ethoxy groups amounts to 0,01% - 0,02%, the relative error to about 1%. This method makes possible the determination of amounts of up to 1,5% alcohol by means of $\text{Fe}[\text{Fe}(\text{SCN})_6]$ and of 1,4 - 5% alcohol when using methyl violet.

The determination with methyl violet was carried out by the authors also for methanol. Phenol can be determined in organosilicon compounds from an aqueous extraction which can be separated from the phenoxy silanes and other organosilicon compounds insoluble in water (Ref 2). The determination of phenol is carried out photometrically on the basis of the coloration with Ferrichloride or with ammoniacal copper salt. The measurements were carried out by means of a Pulfrich photometer. Also for these determinations calibration curves were plotted which are mentioned in the paper. The smallest amount of phenol

Card 2/3

The Determination of Alcohol and Phenol Admixtures in Organosilicon Compounds Containing Ethoxy, Methoxy, and Phenoxy Groups

SOV/75-13-4-25/29

which can be traced in the determination with Ferrichloride is 0,05%, and in the determination of ammoniacal copper salt solution it is 0,015%. The relative error in the determination in either case amounts to 0,7 - 1,4%. The plotting of the calibration curves and the carrying out of the determinations are described in detail. There are 3 figures and 2 references, 2 of which are Soviet.

ASSOCIATION:

Moskovskiy khimiko-tekhnologicheskii institut im. D. I. Mendeleeva (Moscow Chemical and Technological Institute imeni D. I. Mendeleev)

SUBMITTED:

January 9, 1957

1. Silicon compounds (Organic)--Chemical analysis
2. Alcohol--Determination
3. Phenols--Determination
4. Photometry--Applications
5. Methyl violet--Applications

Card 3/3

5(2), 5(3)

AUTHORS:

SOV/64-59-5-27/28
Kreshkov, A. P., Doctor of Chemical Sciences, ~~Bork, V. A.~~, Candidate of Chemical Sciences, Yarovenko, A. N. Candidate of Chemical Sciences

TITLE:

Theoretical Principles and Calculations in Analytical Chemistry, 2nd Modified and Completed Edition (Approved by the Glavnoye upravleniye tekhnologicheskikh vysshikh uchebnykh zavedeniy MVO SSSR (Main Administration of Technological Colleges MVO USSR)) as a Textbook for Chemical-technological Vuzes and Departments, Soviet Science, M., 1956, 447 Pages, 9 Rubles 25 Copecks

PERIODICAL:

Khimicheskaya promyshlennost', 1959, Nr 5, pp 460 - 461 (USSR)

ABSTRACT:

The above book is reviewed and judged negative. The book contains a considerable amount of mistakes, inexact formulations and wrong determinations, possibly due to carelessness or insufficient knowledge of the author. The manuscript of the book was not revised and corrected with the necessary accuracy by the editors. A number of incorrect passages and inadequate explanations are pointed out.

Card 1/1

BORK, V.A.; KORNBLIT, I.I.

Acidproof ceramic materials from zirconium dioxide. Trudy MKHTI
no.27: 229-231 '59. (MIRA 15:6)
(Ceramic materials) (Zirconium oxide)

5 (3)

AUTHORS: Kreshkov, A. P., Bork, V. A. (Moscow) SOV/74-28-5-4/7

TITLE: Successes in the Field of Analysis of Organosilicon Compounds
(Uspekhi v oblasti analiza kremniyorganicheskikh soyedineniy)

PERIODICAL: Uspekhi khimii, 1959, Vol 28, Nr 5, pp 576 - 604 (USSR)

ABSTRACT: The publication data on the analysis of organosilicon compounds were generalized in the present paper. Organosilicon compounds are characterized by specific properties which differ from the corresponding hydrocarbons and their analogues to a considerable extent. These properties do not permit to employ the methods used in the analysis of organic substances without corresponding modifications. Sometimes it is necessary to develop completely new methods. In this connection also a certain similarity between the individual organosilicon compounds and organic compounds is to be taken into account. The comparison of physical constants of organosilicon compounds and the constants of the corresponding carbons is of great theoretical and practical importance. The comparison of refractive indices and surface tension permits the conclusion that in this case more complicated relations are concerned than in the case of a comparison of densities with boiling points of the same compounds. Recent-

Card 1/4

Successes in the Field of Analysis of Organosilicon
Compounds

SOV/74-28-5-4/7

ly new methods of quantitative determinations of organosilicon compounds as well as of various substances produced on the basis of them were worked out. It was the first time that general qualitative reactions with organosilicon compounds as well as reactions with individual classes and representatives of these compounds were discovered. (Refs 3-16). Recently many papers by Soviet and foreign research workers dealing with quantitative analyses were published; the subject of the mentioned papers is both elementary analysis of organosilicon compounds and the detection of the functional groups they contain. The decomposition of these compounds - silicic acid is formed in this connection - is brought about by various methods. These methods may be divided into 4 principal groups: A) Methods on the basis of combustion (Refs 17-31); B) Methods of wet oxidation (Refs 10, 23, 33-44); C) Methods on the basis of amalgamation (Refs 10, 20, 45-49); D) Methods on the basis of hydrolytic decomposition (Refs 10, 40, 50-64). The development of the elementary method took the way of completion of all mentioned methods. For determining the functional groups methods are employed that were suggested for the determination of the following types of

Card 2/4

Successes in the Field of Analysis of Organosilicon Compounds

SOV/74-28-5-4/7

groups: A) alkoxy- and aroxy groups (Refs 4, 65-68); B) hydroxyl groups (Refs 10, 69-78); hydrogen bound with silicon and Si-Si bonds (Refs 10, 40, 79-87); D) acetyl groups (Refs 23, 24, 88-90); E) double and triple bonds (Refs 91, 92); F) phenyl groups directly bound to silicon atoms (Ref 93). The physico-chemical and physical methods of analysis are: 1) photocolometric analysis (Refs 10, 16, 45, 75, 94-103); 2) Molecular spectrum analysis (Refs 10, 104-130); 3) thermographical method (Refs 131-133); 4) titration in anhydrous media (Refs 16, 68); 5) polarographical analysis (Ref 134). Furthermore, several papers deal with the analysis of technical products: 1) analysis of ceramic substances on organosilicon basis (Refs 135, 136); 2) analysis of polysiloxane liquids (Refs 32, 65, 137-138); 3) analysis of several other technical products obtained on organosilicon basis (Refs 139-142); 4) analysis of several mixtures obtained as a result of the synthesis or the decomposition of organosilicon compounds (Refs 143-146). The production control of organosilicon compounds is described by several papers: 1) production control of ethyl- and phenylethoxy siloxanes (Ref 93); 2) control of the direct synthesis of methyl-, ethyl- and phenyl-

Card 3/4

Successes in the Field of Analysis of Organosilicon
Compounds

SOV/74-28-5-4/7

chlorosiloxanes (Refs 51, 93, 108); 3) control of hydrolysis and the condensation processes in the production of polymeric organosilicon compounds (Ref 93); 4) analysis of organosilicon polymers (liquids and varnishes) (Refs 21, 22, 93). The further development of the analysis of organosilicon compounds is the natural consequence of the demands made by production. The existing control methods are no more sufficient for the modern requirements. They are in the first line too slow and in the case of several processes of production there are no satisfactory methods at all. It is impossible to prefer one of the mentioned methods. Only a combination of chemical, physical and physico-chemical methods on the basis of the use of all technical means, gathered by the carrying out of analytical chemistry through several years, may correspond to the requirements made to the methods of analysis. There are 146 references, 84 of which are Soviet.

Card 4/4

5(3)

SOV/80-32-4-8/47

AUTHORS: Abramson, I.D., Bork, V.A., Kornblit, I.I.

TITLE: The Preparation of Corundum Base Acid-Resistant Materials by
the Addition of Silicon-Organic Polymers
(polucheniye kislotoupornykh materialov na osnove korunda s
dobavkoy kremniyorganicheskikh polimerov)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 4, pp 750-756 (USSR)

ABSTRACT: Acid-resistant products may be manufactured from white electric corundum with the addition of a silicon-organic polymer, i.e., ethylsilicate 40, which has been hydrolyzed in a water-alcohol solution to a SiO_2 content of 21.9%. During pyrolysis the organic part of the compound volatilizes and the silica polymer coats the grains of the principal material [Ref 1, 2]. Electric corundum of the following types is used in the experiments: 100, 180, 320, and the micropowder M-7. The acid-resistance is tested by heating to 300°C and cooling in sulfuric acid in three cycles of 72 hours each. The samples burnt at $1,250^\circ\text{C}$ have the highest mechanical resistance at a SiO_2 content of 3%. The temperature of $1,250^\circ\text{C}$ is too low for such high-melting materials as electric corundum. At $1,600^\circ\text{C}$, shrinking of the samples is observed which reaches the highest

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SOV/80-32-4-8/47

The Preparation of Corundum Base Acid-Resistant Materials by the
Addition of Silicon-Organic Polymers

value in the fine powder M-7. The acid-resistance is the highest in samples burnt at 1,600°C (Table 7). The lowest solubility have the samples manufactured on the base of coarsely grained corundum. Dense acid-resistant materials without filtering properties are obtained at SiO₂ additions of 1.5 g/m² to 5-7 g/m². There are 8 tables, 6 graphs, and 4 Soviet references.

ASSOCIATION: Moskovskiy khimiko-tehnologicheskii institut imeni D.I. Mendeleyeva (Moscow Chemical-Technological Institute imeni D.I. Mendeleyev)

SUBMITTED: November 12, 1958

Card 2/2

86148

S/153/60/003/003/012/036/XX
B016/B058

55300 2209

AUTHORS: Kreshkov, A. P., Bork, V. A.

TITLE: Color Reactions for Organosilicon Compounds and Their Use
for Photometric Analysis

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i
khimicheskaya tekhnologiya, 1960, Vol. 3, No. 3,
pp. 410 - 415

TEXT: The authors report on color reactions developed by them, as well as photometric methods for determining organosilicon compounds. The latter methods are based on the application of the reactions mentioned. This study was mainly conducted because the analysis methods of organosilicon compounds still cannot keep up with their synthesis. The usual methods for organic compounds are therefore difficult to apply. The following peculiarities of organosilicon compounds were utilized for the analysis methods described here: 1) their tendency towards hydrolysis, accompanied by intermolecular condensation; 2) the reactivity of some

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86148

Color Reactions for Organosilicon Compounds
and Their Use for Photometric Analysis

S/153/60/003/003/012/036/XX
B016/B058

highly mobile atoms of the functional groups combined with silicon (Hal, -OR, H, -NH₂, -SR, -CN, -SCN); 3) the great stability of the C-Si bond. At the same time use was made of a certain similarity of the organosilicon compounds with their organic analogs. In conclusion the authors describe the following qualitative reactions elaborated by them: for amino silane, phenoxysilane, hexa-alkyldisiloxane as well as for HSiCl₃ and SiCl₄. They also elaborated photometric methods for the following organosilicon compounds and their mixtures: a) phenoxy- and ethoxy groups in organosilicon compounds; b) admixtures of ethanol and methanol to methoxy- and ethoxy silanes; c) phenol admixture to phenoxy-silanes; d) for trimethylchlorosilane in the presence of other methyl-chlorosilanes; e) for trichlorosilane and f) for admixtures of SiCl₄ in alkoxysilanes. These photometric methods warrant quick analyses and no reagents difficult to obtain or expensive are necessary. There are 22 Soviet references.

86148

Color Reactions for Organosilicon Compounds S/153/60/003/003/012/036/XX
and Their Use for Photometric Analysis B016/B058

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskii institut im.
D. I. Mendeleyeva; Kafedra analiticheskoy khimii
(Moscow Institute of Chemical Technology imeni
D. I. Mendeleyev; Chair of Analytical Chemistry)

SUBMITTED: November 5, 1958

Card 3/3

S/032/61/027/002/004/026
B134/B206

AUTHORS: Kreshkov, A. P., Bork, V. A., and Shvyrkova, L. A.

TITLE: Quantitative analysis of products of direct synthesis of
alkyl chloro silanes

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 2, 1961, 147-149

TEXT: A satisfactory method has so far not been elaborated for the production control of alkyl chloro silanes and their derivatives. In the present case, a method is described which permits a quick and simple determination of the individual components in the mixture of alkyl chloro silanes. The determination of methyl trichloro silane is based on the formation of solid polymer compounds after hydrolytic cleavage and subsequent condensation of the resulting methyl silanetriol. Under these conditions, the other methyl chloro silanes form liquid linear polymers so that the amount of solid polymer can be quantitatively determined by gravimetry or nephelometry. The determination of hydrogen-containing methyl chloro silanes is based on an oxidation of the $\equiv\text{SiH}$ bond with permanganate. SiCl_4 is determined by means of an aqueous solution of

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Quantitative analysis of products ...

S/032/61/027/002/004/026
B134/B206

molybdate, since silicon molybdenum heteropoly acid forms thereby which can be photometrically determined owing to its blue color. The other compounds showing a $\equiv\text{Si}-\text{C}\equiv$ bond do not react with ammonium molybdate. Trimethyl chloro silane is determined by a method previously described (Ref. 9), while the content of dimethyl dichloro silane in the mixture can be calculated from the difference. From the working technique described it can be seen that for the nephelometric determination of methyl trichloro silane in the mixture by means of an ФЭК-М (FEK-M) instrument, a calibration curve must be plotted, since the degree of turbidity depends on the way the mixture was prepared. Up to 10% dimethyl dichloro silane and up to 5% trimethyl chloro silane do not disturb the determination. The content of methyl trichloro silane according to the gravimetric method is calculated by the equation

$$\text{CH}_3\text{SiCl}_3 = (\text{a}_{\text{SiO}_2} + 2.33)/0.16 \quad (\text{a}_{\text{SiO}_2} = \text{quantity of SiO}_2 \text{ weighed after igniting.})$$

For the determination of SiCl_4 , a somewhat modified method (Ref. 10) is applied to determine the ortho-silicic acid ester. The analytical results show that SiCl_4 can be determined by this method in

Quantitative analysis of products ...

S/032/61/027/002/004/026
B134/B206

the presence of methyl chloro silanes. There are 2 figures, 2 tables,
and 10 references: 8 Soviet-bloc and 2 non-Soviet-bloc.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskii institut im. D. I.
Mendeleyeva
(Moscow Institute of Chemical Technology imeni D. I.
Mendeleyev)

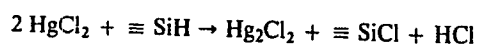
S/075/62/017/003/004/004
I017/I027

AUTHORS. Kreshkov, A. P., Bork, V. A. and Shryrkova, R. A.

TITLE: Determination of $\equiv \text{SiH}$ bonds containing organosilicon compounds by amperometric titration in ethanol-benzene solution

PERIODICAL: Zhurnal analyticheskoy khimii, v.17, no. 3, 1962, 359-361

TEXT: A critical review includes previous works by the author using non-aqueous solutions. The new method is based on the reaction



carried out by titration of the sample with mercuric chloride, and using LiCl dissolved in a mixture of methanol and menzene. Procedure: 0.07-0.12 g of the sample, a hydrogen-containing organosilicon compound are dissolved in benzol and diluted to 25 ml. 0.5-2 ml of this solution is made up to 25 ml with a benzene-methanol mixture (1:1), containing 0.3 mol/l LiCl. The solution is mixed with a glass stirrer and a quantity of metallic mercury is introduced together with a mercury electrode. The polarographic wave was measured at $E = -0.8\text{V}$. After this, a solution of HgCl_2 in a $\text{CH}_3\text{OH}/\text{C}_6\text{H}_6$ (1:1) mixture containing 3 g HgCl_2 in 100 ml is added from a microburet, and the height of the wave measured after the addition of each portion of HgCl_2 solution. The results are plotted on a graph of the volume of added HgCl_2 vs. the height of the wave. The diagrams show the

Card 1/2

Determination of $\equiv \text{SiH}$ bonds containing...S/075/62/017/003/004/004
I017/I027

volume of HgCl_2 necessary to obtain the end point. Typical diagrams show determinations of synthetic and industrial mixtures. The results of three series of experiments show that the method permits titrations of alkylchlorosilanes containing $\equiv \text{SiH}$ bonds; successful determinations are carried out with 0.001 g $\text{CH}_3\text{SiHCl}_2$ containing 1.2×10^{-5} g hydrogen (with silicon). The determination of hydrogen bonded with silicon in alkylchlorosilanes ($\text{CH}_3\text{SiHCl}_2 + \text{CH}_3\text{C}_6\text{H}_5\text{SiCl}_2$) is successful for the range 0.1–0.008%. The determination of ethoxysilanes ($(\text{C}_2\text{H}_5\text{O})_3\text{SiH}$ and $(\text{C}_2\text{H}_5\text{O}_4)\text{Si}$) by this method gives good results for a very wide range of concentrations of the compound being determined; the % error varies from $\pm 0.01 - 0.60$ (absolute). There are 3 figures and 1 table.

ASSOCIATION: Moskovskiy khimiko-tehnologicheskii institut im. D. I. Mendeleeva (Moscow Chemical-Technological Institute im. D. I. Mendeleev)

SUBMITTED: June 22, 1961

Card 2/2

S/032/62/028/002/003/037
B101/B110

AUTHORS: Kreshkov, A. P., Bork, V. A., and Shvyrkova, L. A.

TITLE: Quantitative determination of hydrogen-containing organo-silicon compounds

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 2, 1962, 151 - 154

TEXT: Two methods are described which are based on the formation of Hg_2Cl_2 formed by reaction of HgCl_2 with hydrogen bound to Si. In the phototurbidimetric method, the optical density of the Hg_2Cl_2 suspension is determined by an ФЭК-М (FEK-M) photocolormeter with yellow light filter. Acetone, methyl-ethyl ketone, or their mixtures with benzene were used as solvents. All solvents produced proportional dependence of the optical density on the concentration of the hydrogen-containing organosilicon compounds. 75% benzene + 25% methyl-ethyl ketone was found to be optimum. When determining hydrogen in $\text{CH}_3\text{C}_6\text{H}_5\text{SiHCl}_2$, the presence of phenyl-methyl dichloro silane reduces the optical density. A special calibration scale

Card 1/3

Quantitative determination of...

S/032/62/028/002/003/037
B101/B110

must, therefore, be plotted for determining the $\text{CH}_3\text{C}_6\text{H}_5\text{SiHCl}$ content in phenyl-methyl dichloro silane. The optimum weighed portion of hydrogen-containing organosilicon compound is determined by a preliminary test. The analysis is conducted by comparing the optical densities of two specimens, a standard solution of the hydrogen-containing compound (0.03 g in 50 ml of benzene) being added to one specimen. HgCl_2 (2 g in 100 ml of benzene (75%) + methyl-ethyl ketone) is added to both specimens, and the optical density is measured after 1 hr. This method permits the determination of $5 \cdot 10^{-5}\%$ of Si-bound hydrogen. The maximum relative error is 10%. The standard solution may be used a month. For the gravimetric method, the compound containing an SiH bond is dissolved in an anhydrous solvent, mixed with 2% HgCl_2 solution, and after 1 hr the Hg_2Cl_2 precipitate is filtered off through a glass filter, rinsed with the solvent, dried for 10 min at $90 - 100^\circ\text{C}$, and then weighed. This method permits the determination of $2 \cdot 10^{-3}\%$ of Si-bound hydrogen. There are 4 tables and 6 references: 3 Soviet and 3 non-Soviet. The two references to English-language publications read as follows: J. L. Speier, R. Zimmerman, J.

Card 2/3

Quantitative determination of...

S/032/62/028/002/003/037
B101/B110

Webster, J. Amer. Chem. Soc., 78, 2278 (1956); M. V. George, G. D.
Lichtenwalter, H. Gilman, J. Amer. Chem. Soc., 81, 978 (1959).

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskii institut im. D. I.
Mendeleyeva (Moscow Institute of Chemical Technology imeni
D. I. Mendeleyev)

Card 3/3

ACCESSION NR AM4008922

BOOK EXPLOITATION

s/

Kreshkov, A. P.; Bork, V. A.; Bondarevskaya, YE. A.; Myshlyayeva, L. V.;
Syavtsillo, S. V.; Shemyatenkova, V. T.

Practical handbook on analysis of monomeric and polymeric silicones (Prakticheskoye rukovodstvo po analizu monomernykh i polimernykh kremniyorganicheskikh soyedineniy), Moscow, Goskhimizdat, 1962, 544 p. illus., biblio., index. Errata slip inserted. 6,000 copies printed.

TOPIC TAGS: monomeric silicone, polymeric silicone, silicon, carbon, quality control, lacquer, enamel

PURPOSE AND COVERAGE: This book is a handbook on analysis of monomeric and polymeric silicone compounds. It gives the fundamentals of the theory and modern chemical, physical, and physical-chemical methods of analyzing silicon compounds, methods of determining their physical constants and structure, methods of analyzing the basic chemical products used in their production, and also the methods used in experimental and industrial facilities for quality control. The book is intended for engineers, technicians, and researchers of research and plant laboratories and also for students and graduate students in the field of elemento-organic compounds.

Card 1/2

ACCESSION NR AM4008922

TABLE OF CONTENTS [abridged]:

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Ch. I. Theoretical fundamentals of the analysis of silicone compounds - - 65

Ch. II. Preparation of silicone compounds for analysis and determination of their physical constants - - 116

Ch. III. Qualitative analysis of silicone compounds - - 202

Ch. IV. Quantitative analysis of silicone compounds - - 256

Ch. V. Quantitative determination of functional groups - - 315

Ch. VI. Physical and physical-chemical methods of analyzing silicone compounds - - 357

Ch. VII. Quality control of silicone product production - - 444

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SUB CODE: CH

SUBMITTED: 30Nov62

NR REF SOV: 584

OTHER: 568

DATE ACQ: 29Jul63

Card 2/2

L 13322-63

EWP(j)/EPF(c)/EWT(m)/BDS ASD Pc-4/Pr-4 RM/WW

ACCESSION NR: AT3002343

S/2513/63/013/000/0148/0158

AUTHORS: Bork, V. A.; Shvyrkova

TITLE: Methods for analyzing organosilica compounds containing silica-bonded hydrogen

SOURCE: AN SSSR. Komissiya po analiticheskoy khimii. Trudy. v.13, 1963.
Organicheskiy analiz. 148-156

TOPIC TAGS: hydrogen, silica, phototurbometric method, gravimetric method, photolorimetry, permanganate method, acetic acid, $HgCl_{sub}2$, acetone, methyl-ethylketone

ABSTRACT: Several new methods for the determination of silica-bonded hydrogen atoms in organosilica compounds have been developed. These methods are:
(i) Phototurbidimetric method - based on the reaction of $ESiH$ -bond with $HgCl_2$ in non-aqueous solvents such as acetic acid, acetone, methylethylketone, ethylacetate and butylacetate and also methylethylketone-benzene, and ethylacetate-benzene mixtures; (ii) Gravimetric method - based on the weighing of calomel precipitate obtained by reacting $ESiH$ bond with $HgCl_2$ in benzene-acetone solvent. This method is very simple and fairly accurate;

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-L 13322-63

ACCESSION NR: AT3002343

(iii) Photocolorimetric method - based on the oxidation of SiH bond with KMnO_4 . The color intensity decreases with an increase of concentration of hydrogen containing compounds. The method can be applied in the determination of hydrogen containing impurities up to 30%; (iv) Permanganate method - this method is based on the oxidation of SiH bond with KMnO_4 . The mixture is dissolved in glacial acetic acid and titrated with standard 0.05 N KMnO_4 strongly acidified with H_2SO_4 . Orig. art. has: 5 tables and 3 figures.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskoy institut im. D. I. Mendeleevaya (Moscow Chemical Engineering Institute). Kafedra analiticheskoy khimii (Dept. of Analytic Chemistry).

SUBMITTED: 00

DATE ACQ: 13Jun63

ENCL: 00

SUB CODE: EL, CH

NO REF SOV: 005

OTHER: 004

2/2

Card

KRESHKOV, A.P.; BORK, V.A.; APARSHEVA, M.I.

Amperometric titration of alkylchlorosilanes in methanol-benzene
and acetic acid media. Zhur.anal.khim. 18 no.10:1149-1154 0
'63. (MIRA 16:12)

1. Moskovskiy khimikoptekhnologicheskii institut imeni D.I.
Mendeleeva.

KRESHKOV, A.P.; BORK, V.A.; APARSHEVA, M.I.

Amperometric titration of unsaturated organosilicon compounds
with a solution of iodine chloride in nonaqueous media. Izv.
vys. ucheb. zav., khim. i khim. tekhn. 7 no.5:742-746 '64
(MIRA 18:1)

1. Kafedra analiticheskoy khimii Moskovskogo khimiko-tekhnologicheskogo instituta imeni D.I. Mendeleeva.

KRESHKOV, A.P.; BORK, V.A.; APARSHEVA, M.I.

Amperometric titration of unsaturated organosilicon compounds in
nonaqueous media. Zav. lab. 30 no.10:1208-1211 '64. (MIRA 1964)

1. Moskovskiy khimiko-tekhnologicheskoy institut imeni Mendel'eyeva.

KRESHKOV, A.P.; BORK, V.A.; APARSHEVA, M.I.

Quantitative determination of double bonds in organosilicon compounds
containing silicon hydride groups. Plast. massy no.4:63-65 '65.
(MIRA 18:6)

BORK, V.A.; SHVYRKOVA, L.A.

Bibliography. Plast. massy no.8:68 '65.

(MIRA 18:9)

KRESHKOV, A.P.; BORK, V.A.; SHVYNKOVA, L.A.; APARCHENVA, M.I.

Amperometric and visual titration of chlorides, bromides, and
thiocyanites with cadmium nitrate in anhydrous acetic acid.
Zhur. anal. Khim. 20 no.6:704-708 '65. (MIRA 18:7)

1. Moskovskiy khimiko-tekhnologicheskii institut imeni Mendeleyeva.

LOTAREV, B.M.; BORK, Z.V.

Preparation of viscose containing sodium zincate admixtures.
Khim.volok. no.1:27-29 '60. (MIRA 13:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo
volokna.
(Viscose) (Sodium zincate)

LOTAREV, B.M.; BORK, Z.V.

Forming of alkali cellulose in pulp by the continuous method. Khim.volok
no.6:40-42 '63. (MIRA 17:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna.

BORKA, Attila

Attila Borka, vice-chairman of the Central People's Control Committee, answers the questions of technologists. Musz elet 18 no.5:3 28 F '63.

1. Kozponti Nepi Ellenorzo Bizottsag elnokhelyettese.

BORKA, Istvan, dr.

Sheehan's syndrome following abortion. Orv. hetil. 106 no.14s
652-653 4 Ap '65

1. Bacs-Kiskun megyei Tanacs Korhaz, I. Belosztaly (focervos:
Benedict, Janos, dr.).

BORKA, Jozsef; CSAKI, Frigyes, dr.; FEKETE, Istvan

The 25 kW voltage regulating autodyne and its experimental testing. Elektrotechnika 54 no.6:241-249 Jo '61.

1. Magyar Tudományos Akademia Automatizalasi Kutato Laboratorium.
2. "Elektrotechnika" szerkeszto bizottsagi tagja (for Csaki).

L 17666-66

ACC NR: AP6009378

SOURCE CODE: HU/0012/65/013/001/0003/0006

AUTHOR: Mandi, Andor (Doctor; Doctor of technical sciences; Specialist); Orley, Denes--Yerlei, D. (Specialist); Borka, Jozsef--Borka, Y. (Staff scientist)

ORG: none

TITLE: Basic problems in designing autodynes

SOURCE: Meres es automatika, v. 13, no. 1, 1965, 3-6

TOPIC TAGS: radio receiver, radio equipment

ABSTRACT: Some considerations involved in the designing of autodynes were discussed based on the authors' experience in this field. Formulae were derived for the calculation of the maximum output of direct-current units, single-armature converters, and autodynes proper. Other design considerations discussed include the number of poles for the desired output, the number of phases, and the tension ratio. Some specific parameters for various output ranges in the medium-output class were presented. Orig. art. has: 3 figures, 17 formulas, and 2 tables. [JPRS]

SUB CODE: 09 / SUBM DATE: 22Oct64 / ORIG REF: 002 / OTH REF: 003

Card 1/1

UDC: 621.313.236

BORKA, Sandor

Economy drive of the young railroadmen of Sztalinvaros.
Vasut 8 no.3:20 30 Ap '58.

1. Dunai Vasmu Futohaz.

USSR / General and Special Zoology. Insects. Harm- F
ful Insects and Mites. Fruit and Berry Crop
Pests.

Abs Jour: Ref Zhur-Biol., No 1, 1959, 2334.

Author : Borkan, I.

Inst : Moscow Agricultural Academy imeni K. A. Timiry-
azev.

Title : Testing New Acaricides in the Control of the
Mite, Bryobia redikorzevi in the Crimea.

Orig Pub: Sb. stud. nauchno-issled. rabot Mosk. s.-kh.
akad. imeni K. A. Timiryazeva, 1958, vyp, 8,
259-263.

Abstract: Ether sulphonate and several chlororganic acar-
icides in various concentrations were tested at
the "Plodovod" sovkhos in 1955-1956. Spraying

Card 1/2

USSR / General and Special Zoology. Insects. Harm- P
ful Insects and Mites. Fruit and Berry Crop
Pests.

Abs Jour: Ref Zhur-Biol., No 1, 1959, 2334.

Abstract: with ether sulphonate is most effective in des-
troying mite eggs, less effective is polychloro-
camphene (2%) after the blooming of the apple
tree. -- A. P. Adrianov.

Card 2/2

41

BORKAUSKAS, E. A.

"Studying the Conditions for the Formation of Alpha Semihydrated Gypsum From Local Sources (Birzhayskiy Deposits, Lithuanian SSR), Its Properties, and Also Its Use in Construction." Cand Tech Sci, Lithuanian Agricultural Academy, Kaunas, 1954. (RZhKhim, No 7, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

BORKAUSKAS, E.A.

Impregnating gypsum products with bitumen. Stroi.prom.32 no.11:
46-47 N '54. (MLRA 7:11)

1. Starshiy prepodavatel' Kaunasskogo politekhnicheskogo instituta.
(Gypsum) (Building materials) (Bitumen)

BORKEN, D. D.

USSR/Engineering
Viscosity
Earth - Analysis

May 1948

"Experimental Study of the Viscoplasticity of Earth,"
D. D. Borken, 6 pp

FA 75141

"Zhur Teich Fiziki" Vol XVIII, No 5

Conservationism, which reigns in construction of foundations for buildings is due to insufficient study of properties of earth. Describes results of experiments to determine effect of (a) vibration (b) moisture on viscosity of earth. Viscosity was determined by Stoke's method for thick liquids, i.e.,

75141

USSR/Engineering (Contd.)

May 1948

measurement of force required to sink a metal ball in sample. Shows results graphically. Submitted 18 Nov 1947.

75141

BORKEVICH, G. S.; Berezovskiy, V.N.; Iovinov, I.A.

"High-speed Lathe Carrier Center"

Stanki i Instr #5, May 54

KREPS, Abram Samoylovich; BORKHERT, V.V., kand.ekonom.nauk, nauchnyy red.;
MISHKEVICH, G.I., red.; SHISHKOVA, L.M., tekhn.red.

[Economics of the shipbuilding industry] Ekonomika sudostroitel'noi
promyshlennosti. Izd.2., perer. pod red. V.V.Borkherta. Leningrad.
Gos.soiusnoe izd-vo sudostroit.promyshl.. 1959. 235 p.

(MIRA 13:3)

(Shipbuilding)

(Economics)

Dorchesinus, N. S.
BORKHESNIUS, E.S.

A new scale insect species of the Family Diaspididae (Homoptera,
Coccidea) from the United Arab Republic. Zool. zhur. 40
no. 1:141-143 Ja '61. (MIRA 14:2)

1. Zoological Institute, U.S.S.R. Academy of Sciences, Leningrad.
(Cairo--Scale insects) (Thuja--Diseases and pests)

DZBANOVSKIY N.A.; TSODIKOV, V.V.; BORKHI, L.D.; KHLEBORODOVA, R.T.

Preparation of tetrabutyl ammonium hydroxide by the electro-
chemical method using ion-exchange membranes. Trudy IREA no.25:
427-433 '63. (MIRA 18:6)

AVERINA, Ye.P.; BORKHOVETSKAYA, A.A.

Study of the properdin system in pulmonary tuberculosis.

Vrach. delo no.3:61-63 Mr '64.

(MIRA 17:4)

1. Fakul'tetskaya terapevticheskaya klinika (zav. - zasluzhennyy
deyatel' nauki prof. N.Ye.Kavatskiy) Kuybyshevskogo meditsinskogo
instituta i sanatoriy "Lesnoye" Kuybyshevskoy oblasti.

BORKHSENIUS, N. S.

from Harmful Animals of Central Asia, reference book - SPRAVOCHNIK)
Suborder Coccodae. Scale insects (chervetsy and shchitovki) Referaty, DBS, p. 116, 1944.

'Some Muchnistye scale insects close to pseudo coccus comstochi KUW with descriptions
of new species,' p. 117 Referaty, DBS 1944

S/736/60/000/002/007/007

AUTHORS: Borkhin, I.S., Ol'khov, I.I.

TITLE: Scale resistance of titanium-carbide-based sintered hard alloys.

SOURCE: Vsesoyuznyy nauchno-issledovatel'skiy institut tverdykh splavov.
Sbornik trudov. no.2. Moscow, 1960. Tverdye splavy. pp.148-157.

TEXT: Following a brief survey of the current state of knowledge on TiC-based and Co-cemented sintered alloys (13 all-Western references), the results of 100-hour tests up to 1200°C with varying amounts of NbC, WC, and Co are reported. The preparation of the compound mixtures is described and summarized in a full-page table. According to X-ray analysis, the crystalline lattice of TiC has a period $a=4.32 \text{ \AA}$, that of NbC $a=4.46 \text{ \AA}$ (one phase each only). X-ray analysis of the compound carbide mixture (87% TiC, 13% NbC) manifested the presence of a single solid-solution phase of cubic structure with $a=4.35 \pm 0.03 \text{ \AA}$. Microhardness: NbC 1820 kg/mm², TiC //Abstracter's note: Should probably read TiC-NbC // 2470 kg/mm². The carbide and Co powders were ground and mixed in alcohol in ball mills for 5 days. 5x5x40 mm specimens were pressed at 1000 kg/mm² pressure and sintered in tubular graphite electric furnaces in a H-atmosphere at 1450 to 1560°C. TiC-NbC-Co alloys: In tests at 1000° with a constant 25% Co content,

Card 1/2

Scale resistance of titanium-carbide-based...

S/736/60/000/002/007/907

an increase in NbC from 0 to 10% improves the scale resistance steadily (weight increase drops from 5 to 1 g/m²·hr); no appreciable improvement appears beyond 10% NbC. However, scale-resistance tests from 900 to 1200°C show an optimal value of 15% NbC, especially at the higher temperatures. Tests with a constant NbC and varying Co contents at 1000°C show that a 25% Co content is optimal for scale resistance. A slight advantage is noted in alloys obtained by mixing the compound TiC-NbC powder with Co powder as against alloys made by mixing the separate simple TiC and NbC powders with Co powder of the same % composition. The optimal alloy contains 15% NbC, 25% Co, 60% TiC, with a scale-resistance limit of 1100°. TiC-WC-Co alloys: Scale resistance was found to improve with increased WC content (e.g., TiC/WC = 65/35). An increasing Co content (from 5 to 25%) improves the scale resistance of the latter alloy, but less so for alloys with smaller WC contents. Rapid oxidation occurs at 1100°. Optimal composition: 30% WC, 15-20% Co, remainder TiC; scale-resistance limit 900°. TiC-WC-NbC-Co alloy: Alloys with 10 and 15% NbC and 10 to 20% Co were more scale-resistant than TiC-WC-Co, but less than TiC-NbC-Co. There are 6 figures, 2 tables, and 13 references (8 English-language and 5 German).

ASSOCIATION: None given.

Card 2/2

BORKHSENIUS, N. S.

Inst Zoology, Acad Sci USSR

"Three New Types of Scale, 'Coccoidea, Diaspididae,' from Central Asia"

SOURCE: Dok AN, 58, No 2, 1947

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MBr., Zoology Institute, Acad. Sci., -1947-.

"Taxonomic Significance of the Morphological Symptoms of Parasitic Scale Insects (Coccoides, Pseudococcus)," Dok. AN, 58, no.9, 1947

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Inst Zoology, Acad Sci USSR

"Revision of the Genus Eriococcus Insecta, Homoptera, Coccoidea" p. 50-55

SO: Dok AN, 60, No 3, 1948

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Inst Zoology, Acad Sci USSR

"Phenacoccus Ckll. Insecta, Homoptera, Coccoidea" p. 153-154

SO: Dok AN, 61, No 5, 1948

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Inst Zoology, Acad Sci USSR

"New Scale Insects of the Family Pseudococcidae from Middle Asia (Insecta, Homoptera, Coccoidea)" p. 581-584

SO: Dok AN, 63, No 5, 1948

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"New Kinds of Scale Insects of the Fauna of Central Asia (Insects, Coccoidae, Diaspididae)"

SO: Dok AN, 64, No 5, 1948

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24146 BORKHSENIUS, N. S. K biologii *Oratocelis communimacula* Hv. (Lep. Host.) -
Khishchnika lozhnoshchitovok. Trudy Gos. Nikitskogo botan. sada im.
Holotova, T. XXIV, VPI, 4, 1949, S. 47-49.

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PA 29/49T55

USSR/Medicine - Taxonomy
Medicine - Insects

Feb 49

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"Dok Ak Nauk SSSR" Vol LXIV, No 5

Diaspididae are divided into three subgroups, Diaspidini, Odonaspidine and Aspidiotini. Introduces three new types of the first, one of the second, and one of the third. Submitted by Acad Ye, N. Pavlov, 1 Dec 48.

29/49T55

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Inst Zoology, Acad Sci USSR

"Insecta, Coccoidea, Asterolecaniidae from Brazil" p. 127-128

SO: Dok AN, 70, No 4, 1950

Zoological Inst, AS USSR, Dokl. Ak. Nauk, SSSR, 71, No. 4, p.781

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New genera and species of scale insects of the family Coccidae (=Lecanidae) of the fauna of the U.S.S.R. and adjacent countries (Insecta, Homoptera, Coccoidea). Trudy zool. inst. 12:269-316 '52. (MLRA 6:6)

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New genus and new species of scale insects in Iran (Homoptera,
Coccoidea). Ent.oboz. 32:261-263 '52. (MLRA 7:1)

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[Speeches at the 5th annual lecture session in memory of N.A. Kholodkovskii, on April 9, 1952.] Doklady na piatom eshagednom chtenii pamiati N.A.Kholodkovskogo, 9 apreliia 1952 g. Moskva, Izd-vo Akademii nauk SSSR, 1953. 39 p. (MLRA 7:4)

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PAVLOVSKIY, Ye.N., akademik, redaktor; VINOGRADOV, B.S., redaktor;
ARNOL'DI, E.V.; BNY-BIYENKO, G.Ya.; BORKHSENIUS, N.S.; VINOGRADOV, B.S.;
GUTSEVICH, A.V.; KIRICHENKO, A.N.; KIR'YANOVA, Ye.S.; KOZHANCHIKOV, I.V.;
LEPNEVA, S.G.; LIKHAREV, I.M.; MAL'VICH, I.I.; NOVIKOV, G.A.; POPOV, V.V.;
POPOVA, A.N.; SOCHAVA, V.B.; STARK, V.N.; TERENT'YEV, P.V.; KHARITONOV,
D.Ye.; CHERNOV, V.B.; SHAPOSHNIKOV, G.Mh.; SHTAKEL'BERG, A.A.; YUDIN, K.A.

[Animal life of the U.S.S.R.] Zhivotnyi mir SSSR. Vol.4 [Forest zone]
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BORKHSENIUS, Nikolay Sergeyevich, Dr. Biol. Sci.

Order of Badge of Honor

VAN, No. 10, 1953